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REMARKS

Entry of this amendment is respectfully requested. Claims 95-123 are pending.

The Examiner objected to the specification at page 13, lines 6-8, stating that the definition of "n" remains unclear. Applicants have amended the specification to clarify the definition of "n" and request that this objection be withdrawn.

The Examiner also objected to the specification due to the recitation of "EC 2.7.5.6" next to deoxyribomutase. As acknowledged by the Examiner at page 3 of the Office Action, the current EC number associated with deoxyribomutase is "EC 5.4.2.7" not "EC 2.7.5.6." It appears that Applicants used an old enzyme database, which resulted in recitation of "EC 2.7.5.6", which is currently not assigned to any enzyme. The specification has been amended to recite the correct enzyme code. Since "EC 2.7.5.6" was previously used to identify deoxyribomutase, and this amendment serves to correct the error in identification, this does not constitute new matter.

Claims 95, 103 and 115 have been amended in accordance with the Examiner's suggestions as discussed in items 3-5 of the Office Action, and Applicants request that these objections be withdrawn.

The Examiner rejected claims 106, 115, 117, and 121-123 under 35 U.S.C. 112, second paragraph, as being indefinite. Regarding claim 106, the Examiner indicates that deoxyribomutase and phosphopentomutase are equivalent (both known as EC 5.4.2.7). The claim has been amended herein to delete deoxyribomutase. Regarding claim 115, the Examiner maintains that "stringent conditions" is indefinite. Applicants maintain that "stringent conditions" are adequately defined in the specification at page 12, lines 19-21, where it states that stringent hybridization conditions are defined as those described by Sambrook, et al.

Regarding claim 117, the Examiner is unclear as to which step "the reaction" refers to. Claim 117 has been amended to clarify that the complete reaction of steps (i) to (iii) is carried out without isolating intermediate products.

Regarding claims 121 and 123, the Examiner argues that recitation of the specific materials are indefinite because there is no indication that either material would be a starting material or byproduct of the reaction. Claims 120-123 have been amended to indicate that the starting materials and byproducts are in reference to the reaction to generate GAP (as covered in claim 118). Support for this amendment is found at page 7, line 15 – page 8, line 2, which indicates that GAP should be generated from suitable precursors such as fructose 1,6-diphosphate (FDP), and that deoxyxynulose 1-phosphate (dX1P) is an undesired byproduct of this reaction.

Finally, the term "substantial" in claim 122 is considered indefinite because, according to the Examiner, there is no standard in the specification for determining what this term means. Claim 122 has been amended and no longer recites this term.

Based on the foregoing amendments and discussion, Applicants maintain that the rejection of claims 106, 115, 117, and 121-123 under 35 U.S.C. 112, second paragraph, should be withdrawn.

The Examiner has also rejected all pending claims under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, and as not enabled. Claims 95 and 116 have been amended to specify that the methods are for synthesis of purine deoxyribonucleosides and thus, no longer encompass synthesis of any deoxyribonucleoside as argued by the Examiner. Further, claim 116 has been amended to indicate that step (iii) must be enzymatically catalyzed. Based on these amendments, Applicants maintain that there is adequate written description and that the claims are enabled.

Finally, the Examiner rejected claims 116-118 and 120-124 as obvious under 35 U.S.C. 103(a) over Barbas (cited in specification) in view of Baranov et al. (EP 0593757). The Examiner argues that Barbas teaches a process for the production of deoxyribonucleosides and that Baranov teaches removal of the inorganic phosphate. Hence, according to the Examiner, one of skill in the art would be motivated to modify the method of Barbas to remove the inorganic phosphate as disclosed in Baranov.

Claims 116 has been amended to require elimination of inorganic phosphate by substrate phosphorylation. Neither of the cited references, alone or in combination, teach or suggest removal of inorganic phosphate by substrate phosphorylation. The Examiner has conceded this point at page 13 of the Office Action, and further indicated that she has not found any motivation in the prior art for removal of inorganic phosphate by phosphorylation of a substrate in a method for producing deoxyribonucleosides. Hence, the claims as amended are not obvious and the rejection should be withdrawn.

Based on the foregoing, Applicants maintain that the application is in condition for allowance. No fees are believed due with this amendment, however authorization is given to charge deposit account no. 50-0624, should there be any fees due.

Respectfully submitted,

FULBRIGHT & JAWORSKI, L.L.P.

By



Norman D. Hanson

Reg. No. 30,946

666 Fifth Avenue  
New York, New York 10103  
(212) 318-3000